

AMENDMENTS TO THE CLAIMS

1. (Canceled)

2. (Canceled)

3. (Previously Presented) The method of claim 23,
wherein the plate material comprises carbon-based material.

4. (Previously Presented) The method of claim 3,
wherein the plate material comprises carbon fiber composite
material.

5. (Previously Presented) The method of claim 4,
wherein the carbon fiber composite material is densified
with a polymeric filler.

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Previously Presented) The method of claim 6, wherein a sandblasting gun comprises a particulate etchant accelerator.

11. (Previously Presented) The method of claim 23, wherein sand, bead or grit material of said sandblasting, bead blasting or grit blasting, respectively, is harder than the plate material.

12. (Previously Presented) The method of claim 11, wherein the sand, bead or grit material comprises silica grit having a diameter of 180-220 μm .

13. (Previously Presented) The method of claim 12, wherein the plate material comprises a graphitized carbon-carbon composite material.

14. (Previously Presented) The method of claim 23, further comprising holding the particulate etchant-resistant patterned mask in contact with the plate material by an adhesive substance.

15. (Previously Presented) The method of claim 23, wherein the particulate etchant-resistant patterned mask is a photoresist mask.

16. (Previously Presented) The method of claim 23, wherein the particulate etchant-resistant patterned mask comprises a vinyl polymer.

17. (Previously Presented) The method of claim 23, wherein the pattern design determines a fluid entry gallery and a fluid exit gallery on the flow field plate.

18. (Original) The method of claim 17, wherein the fluid entry gallery and the fluid exit gallery are formed by etching aligned positions on opposite faces of the flow field plate such that the fluid entry gallery and the fluid exit gallery pass through the flow field plate.

19. (Previously Presented) The method of claim 23, wherein the pattern design determines a sealing groove on the flow field plate.

20. (Previously Presented) The method of claim 23, wherein the sand, bead or grit blasting under the control of

a two-axis scanning mechanism that determines movement of a particulate etchant accelerator for sand, bead or grit material of the sand, bead or grit blasting, respectively, relative to the plate material.

21. (Previously Presented) The method of claim 20, wherein the two-axis scanning mechanism enables a predetermined movement of the plate material relative to the particulate etchant accelerator such that the movement is in the form of a raster pattern or a stepped scan pattern.

22. (Previously Presented) A flow field plate formed by the method of claim 23.

23. (Currently Amended) A method for manufacturing flow field plates for use in fuel cells, electrolyzers and batteries which contain a fluid electrolyte comprising providing a plate material of electrically conductive material and impermeable to hydrogen and oxygen, positioning a particulate etchant-resistant patterned mask comprising a pattern design adjacent the plate material, sandblasting, bead blasting or grit blasting, ~~in which a the~~ particulate etchant-resistant patterned mask ~~is used, so that to provide~~ a fluid flow pattern determined by ~~a~~ the pattern design on

6086/USSN 09/875,685
Group Art Unit 1745

said mask ~~is formed~~ on said plate material, wherein the
fluid flow pattern distributes fuel and oxidant across the
plate material.